



## Microbiological assessment of private drinking water supplies in Co. Cork, Ireland

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### Abstract:

The microbiological quality of 75 private drinking water supply boreholes in Co. Cork, Ireland was assessed in order to determine the incidence of contamination and the potential pathways of such contamination. Microbiological analysis was carried out using the membrane filtration technique for the recovery of thermotolerant (faecal) coliforms. The sanitary protection of the supplies was evaluated by means of systematic inspections and subsequent qualitative sanitary risk assessment. Almost a quarter of all supplies investigated (24%, n Euro Surveillance (Bulletin Européen Sur Les Maladies Transmissibles; European Communicable Disease Bulletin) 18) was found positive for thermotolerant coliforms. Weather conditions had a significant impact on microbiological water quality, increasing both contamination incidence and gross contamination frequency. Over half of the supplies had nine or more sanitary hazards and most had rudimentary sanitary protection measures at the head of the borehole. These low sanitary protection measures suggest that boreholes can pose a significant hazard to valuable groundwater resources by providing direct contamination routes.

**Source:** <http://dx.doi.org/10.2166/wh.2011.053>

### Resource Description

#### Exposure :

weather or climate related pathway by which climate change affects health

Food/Water Quality

**Food/Water Quality:** Pathogen

#### Geographic Feature:

resource focuses on specific type of geography

None or Unspecified

#### Geographic Location:

resource focuses on specific location

Non-United States

**Non-United States:** Europe

# Climate Change and Human Health Literature Portal

**European Region/Country:** European Country

**Other European Country :** Ireland

**Health Impact:** ☒

specification of health effect or disease related to climate change exposure

Infectious Disease

**Infectious Disease:** Foodborne/Waterborne Disease

**Foodborne/Waterborne Disease:** General Foodborne/Waterborne Disease

**Resource Type:** ☒

format or standard characteristic of resource

Research Article

**Timescale:** ☒

time period studied

Time Scale Unspecified